

## **Salinas Valley Groundwater Basin, Corral de Tierra Area Subbasin**

- Groundwater Basin Number: 3-4.10
- County: Monterey
- Surface Area: 22,300 acres (35 square miles)

### **Basin Boundaries and Hydrology**

The Salinas Valley-Corral de Tierra Area Subbasin comprises the eastern portion of the former Fort Ord and other unincorporated areas. The subbasin includes outcrops of Plio-Pleistocene nonmarine units, including the Aromas Sands, the Paso Robles Formation, the Santa Margarita Formation and the Monterey Formation (Jennings and Strand 1956, Muir 1982 and GTC 1984). The subbasin is bounded on the northwest by the Seaside Area subbasin, and on the northeast by the 180/400 foot aquifer subbasin. On the south and southwest the subbasin is bounded by Middle Miocene marine rock units, and a portion of the eastern boundary is a small area of Mesozoic granitic rocks (Jennings and Strand 1956). Surface drainage is primarily toward the northeast to the Salinas Valley by several small creeks which occupy canyons. Elevations range from about 60 feet in the canyon bottoms to 800 feet along a few ridges. Average annual precipitation is approximately 15 inches in the north central portion to 17 inches at the southeast and southwest portions.

### **Hydrogeologic Information**

#### ***Water Bearing Formations***

From oldest to youngest, the primary water-bearing units of the subbasin are the Miocene/Pliocene Santa Margarita Formation, the Pliocene Paso Robles Formation, and the Pleistocene Aromas Sands (GTC 1984). Groundwater also occurs locally in alluvial material along creeks in the canyon bottoms.

The Santa Margarita Formation is a poorly consolidated marine sandstone. This unit is an important water-bearing formation in the subbasin. It underlies the Paso Robles Formation and has a maximum thickness of 225 feet (GTC 1984).

The Paso Robles Formation is the major water-bearing unit in the area and consists of sand, gravel, and clay interbedded with some minor calcareous beds (GTC 1984).

The Aromas Sands consist of relatively clean red to yellowish-brown, well sorted sand and has an estimated thickness of up to 200 feet within the subbasin.

#### ***Restrictive Structures***

At least three anticlines, two synclines and two faults exist within the Corral de Tierra subbasin (Muir 1982). No evidence was found to indicate that these geologic structures have any effect on the movement of groundwater. Differences between horizontal and vertical conductivity is reported to result in partial confinement (Muir 1982).

### **Recharge Areas**

Groundwater recharge is from deep percolation of local precipitation and from seepage from creeks (Muir 1982 and GTC 1984).

### **Groundwater Level Trends**

No long-term water level information was found in the published literature or within the DWR files.

### **Groundwater Storage**

The total storage capacity of this subbasin has not been determined.

### **Groundwater Budget (Type C)**

There is not enough data to estimate a budget for this basin.

### **Groundwater Quality**

**Characterization.** Groundwater in this subbasin is a bicarbonate-chloride type with calcium and sodium the predominate cations, TDS ranges from 355-679 mg/L (DWR 1967).

**Impairments.** The groundwater is very hard, and one well has a reported specific conductance of 1060  $\mu$ mhos/cm (DWR 1967).

### **Water Quality in Public Supply Wells**

Constituent Group <sup>1</sup>	Number of wells sampled <sup>2</sup>	Number of wells with a concentration above an MCL <sup>3</sup>
Inorganics – Primary	9	0
Radiological	11	0
Nitrates	9	0
Pesticides	10	0
VOCs and SOCs	10	0
Inorganics – Secondary	9	5

<sup>1</sup> A description of each member in the constituent groups and a generalized discussion of the relevance of these groups are included in *California's Groundwater – Bulletin 118* by DWR (2003).

<sup>2</sup> Represents distinct number of wells sampled as required under DHS Title 22 program from 1994 through 2000.

<sup>3</sup> Each well reported with a concentration above an MCL was confirmed with a second detection above an MCL. This information is intended as an indicator of the types of activities that cause contamination in a given basin. It represents the water quality at the sample location. It does not indicate the water quality delivered to the consumer. More detailed drinking water quality information can be obtained from the local water purveyor and its annual Consumer Confidence Report.

## Well Characteristics

Well yields (gal/min)		
Municipal/Irrigation	Range: 3 – 2600	Average: 600 (DWR well records, 11 wells)
Total depths (ft)		
Domestic	Range: 60- 950	Average: 350 (DWR well records, 218 wells)
Municipal/Irrigation	Range: 112 - 948	Average: 450 (DWR well records, 34 wells)

## Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
Department of Health Services and cooperators	Groundwater levels	
	Miscellaneous water quality	3 Annually (DWR 1967)
	Title 22 water quality	26 Varies

## Basin Management

Groundwater management:

Water agencies

Public

Private

Bishop Water Co., Amber Water Co., Torro Water Co.

## References Cited

- California Department of Water Resources. 1967. Monterey County Water Quality Investigation.  
Prepared for the Central Coastal Regional Water Quality Control Board. 150 p. plus plates.
- Geotechnical Consultants, Inc. (GTC). 1984. Hydrogeologic Update: Fort Ord Military Reservation and  
Vicinity. Monterey County, California. Prepared for the U.S. Army Corps of Engineers.
- Jennings, C.W. and Strand, R.G. 1956. Geologic Map of California, Santa Cruz Sheet. Scale 1:250,000.
- Muir, K.S. (U.S. Geological Survey). 1982. Ground Water in the Seaside Area, Monterey County,  
California. Water Resources Investigations 82-10. 37 p.

## Additional References

- California Department of Water Resources, San Joaquin District. 1984. Land and Water Resources,  
Monterey County, District Report. 34 p.
- Thorup, R.R., 1976, Groundwater Study of Highway 68; Monterey, California. 57p.

## **Errata**

Changes made to the basin description will be noted here.